

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 September 2006 (08.09.2006)

PCT

(10) International Publication Number
WO 2006/094238 A3

(51) International Patent Classification:
C12N 15/11 (2006.01) *C12Q 1/68* (2006.01)

(21) International Application Number:
PCT/US2006/007747

(22) International Filing Date: 3 March 2006 (03.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/658,248 3 March 2005 (03.03.2005) US
60/705,631 3 August 2005 (03.08.2005) US
60/732,539 1 November 2005 (01.11.2005) US

(71) Applicant (*for all designated States except US*): **ISIS PHARMACEUTICALS, INC.** [US/US]; 1896 Rutherford Rd, Carlsbad, CA 92008 (US).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **SAMPATH, Rangarajan** [US/US]; 12223 Mannix Road, San Diego, CA 92129 (US).

(74) Agents: **CASIMIR, David** et al.; Medlen and Carroll, LLP, Suite 305, 101 Howard Street, San Francisco, California 94105 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SI, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
8 February 2007

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPOSITIONS FOR USE IN IDENTIFICATION OF ADVENTITIOUS VIRUSES

(57) Abstract: The present invention provides compositions, kits and methods for rapid identification and quantification of adventitious contaminant viruses by molecular mass and base composition analysis.



WO 2006/094238 A3

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/007747

A. CLASSIFICATION OF SUBJECT MATTER
INV. C12N15/11 C12Q1/68

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C12Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, EMBASE, Sequence Search

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE EMBL 4 March 2000 (2000-03-04), XP002394969 Database accession no. L15697 abstract	1,3
X	----- DATABASE EMBL 21 May 2003 (2003-05-21), XP002394973 Database accession no. AB068711 abstract	2
X	----- WO 92/19774 A (DANA FARBER CANCER INSTITUTE) 12 November 1992 (1992-11-12) page 18 - page 19 ----- -/--	1-20

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

17 August 2006

Date of mailing of the international search report

05/09/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Guarinos Viñals, E

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/007747

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WHILEY DAVID M ET AL: "Simultaneous detection and differentiation of human polyomaviruses JC and BK by a rapid and sensitive PCR-ELAHA assay and a survey of the JCV subtypes within an Australian population." JOURNAL OF MEDICAL VIROLOGY, vol. 72, no. 3, March 2004 (2004-03), pages 467-472, XP002394965 ISSN: 0146-6615 the whole document	1-20
X	VOELTER C ET AL: "Screening human tumor samples with a broad-spectrum polymerase chain reaction method for the detection of polyomaviruses" VIROLOGY, ACADEMIC PRESS, ORLANDO, US, vol. 237, no. 2, 27 October 1997 (1997-10-27), pages 389-396, XP002242736 ISSN: 0042-6822 the whole document	1-20
X	FEDELE C G ET AL: "Quantitation of polyomavirus DNA by a competitive nested polymerase chain reaction" JOURNAL OF VIROLOGICAL METHODS, vol. 88, no. 1, July 2000 (2000-07), pages 51-61, XP002394966 ISSN: 0166-0934 the whole document	1-20
X	FEDELE C G ET AL: "Multiplex polymerase chain reaction for the simultaneous detection and typing of polyomavirus JC, BK and SV40 DNA in clinical samples" JOURNAL OF VIROLOGICAL METHODS, vol. 82, no. 2, October 1999 (1999-10), pages 137-144, XP002394967 ISSN: 0166-0934 the whole document	1-20
X	VILCHEZ REGIS A ET AL: "Detection of polyomavirus simian virus 40 tumor antigen DNA in AIDS-related systemic non-Hodgkin lymphoma" JAIDS JOURNAL OF ACQUIRED IMMUNE DEFICIENCY SYNDROMES, vol. 29, no. 2, 1 February 2002 (2002-02-01), pages 109-116, XP009071192 ISSN: 1525-4135 the whole document	1-20

-/--

INTERNATIONAL SEARCH REPORT

International application No

PCT/US2006/007747

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 02/099130 A (UNIVERSITY COLLEGE LONDON; GRIFFITHS, DAVID, JOHN; KELLAM, PAUL; WEISS) 12 December 2002 (2002-12-12) -----	
A	WO 02/099129 A (UNIVERSITY COLLEGE LONDON; GRIFFITHS, DAVID, JOHN; KELLAM, PAUL; WEISS) 12 December 2002 (2002-12-12) -----	

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2006/007747

Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

a. type of material

☒

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☒

on paper

☒

in electronic form

c. time of filing/furnishing

☒

contained in the international application as filed

☒

filed together with the international application in electronic form

☐

furnished subsequently to this Authority for the purpose of search

2. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2006/007747

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9219774	A	12-11-1992	US 5213796 A	25-05-1993
WO 02099130	A	12-12-2002	NONE	
WO 02099129	A	12-12-2002	AU 2002311446 A1	16-12-2002